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| 10/705,455      | 11/12/2003  | Yusaku Fujii         | 1075.1237           | 6699             |

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| EXAMINER |
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KOZIOL, STEPHEN R

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| ART UNIT | PAPER NUMBER |
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2624

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02/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/705,455

Applicant(s)

FUJII, YUSAKU

Examiner

Stephen R. Koziol

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/28/2008.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-12, 14 and 16-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12, 14 and 16-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Detailed Action

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/28/2008 has been entered.

Applicant has amended claims 1, 2, 7, 12, 14, and 16-27 in an attempt to clarify the present invention. No new matter has been added by way of the present amendments.

***Specification – Objections***

2. The current title is ponderous and unwieldy. A more succinct title is suggested: “Organism Minutiae Acquiring and Authentication System,” or the like.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in ***Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (*See MPEP Ch. 2141*)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

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4. Claims 1-4, 7-8, 10-12, 14, and 16-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. in view of Mainguet U.S. 6,289,114.

Regarding claim 1, Hsu teaches an organism characteristic data acquiring apparatus for acquiring organism characteristic data for at least one of registration organism characteristic data storage and an authentication unit for authenticating the identification object person, from each of an identification object person and/or a registration object person to authenticate the identification object person based on the organism characteristic data (*Hsu, col. 6 ln. 24-48*), comprising:

- i. a sampling section for sampling a partial image of a portion of an organism from each of the identification object person and/or the registration object person (*Hsu, col. 2 ln. 13-34*);
- ii. a detection section for detecting, every time a partial image is sampled by said sampling section, a relative positional relationship between the partial image and one of other partial images sampled already (*Hsu, fig 2 item 54, introduced in col. 2, ln. 16-20, and expanded upon in col. 9 ln. 27-60, where the disclosed "feature detection" unit comprises the claimed detection section*);
- iii. an extraction section for extracting, every time a partial image is sampled by said sampling section, characteristic portion data including characteristic information unique to the organism portion from the partial image (*Hsu, fig 2 items 46-50, introduced in col. 2, ln. 16-20 and expanded upon in col. 9 ln. 42-60 where Hsu's system extracts reference patches not limited to containing ridge bifurcation points which correspond to the claimed extraction of characteristic information*); and

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- iv. a synthesis section for synthesizing, every time a partial image is sampled by said sampling section, the characteristic portion data of the partial image extracted by said extraction section and characteristic portion data of the other partial image based on the relative positional relationship of the partial image detected by said detection section and outputting a result of the synthesis as organism characteristic data of the portion of the organism for the at least one of registration organism characteristic data storage, and an authentication unit for authenticating the identification object person (*Hsu, fig 2 items 54-58, introduced in col. 2, ln. 22-39 and expanded upon in col. 16 ln 10-51, where Hsu discloses using the relative positional relationship of the images to authenticate an object person*).

Hsu is silent on:

- i. the sampling section for successively sampling partial images...each sampled partial image having an overlapping portion shared with a previously sampled partial image sampled immediately before the sampled partial image. However, Mainguet teaches a successive partial image data acquiring and authentication system wherein each partial image overlaps a previously sampled partial image (*Mainguet, figures 5, 10-12 and introduced in col. 3 lines 8-23 and expanded upon in at least col. 8 lines 31-51*).
- ii—iv. the detecting occurring substantially contemporaneously and subsequent to obtaining the sampled image and using overlapping portions between successively sampled partial images. However, Mainguet teaches a successive partial image data acquiring and authentication system wherein each partial image overlaps a previously sampled partial image with the detecting occurring substantially contemporaneously and subsequent to

obtaining the sampled image (*Mainquet, figures 5, 10-12 as introduced in col. 3 lines 8-23 and expanded upon in at least col. 8 lines 31-51*).

Therefore it would have been obvious to a person having ordinary skill in the image processing arts at the time of the invention to modify Hsu's fingerprint feature correlator to include the teachings of Mainquet as shown above to take advantage of the increased speed and processor efficiency gained from using overlapping, successively sampled partial image portions (as opposed to entire fingerprint images) in an authentication system.

Regarding claim 2 Hsu et al. discloses an organism characteristic data acquiring apparatus wherein said sampling section samples ~~a partial image of~~ a pattern formed from ridge of the portion of the organism (figs 3 and 4 for ridge detection, also, col. 2, ln. 40-51).

Regarding claim 3 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the characteristic portion data, information regarding a characteristic point of the ridge (fig 8 item 60, also, col. 2 ln. 40-51, also, col. 9, ln. 60-67).

Regarding claim 4 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the information regarding a characteristic point of the ridge, at least one of a position, a type and a direction of the characteristic point (fig 8, item 60 and col. 10, ln. 19-30 where information about the position and type of the detected ridge is extracted).

Regarding claim 7 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the characteristic portion data, a position of a ridge end which is at an end of the sampld partial image (fig 8 item 60, col. 10, ln. 44-76).

Regarding claim 8 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the characteristic portion data, information of a connectional relationship between the characteristic point and the ridge end (fig 8 item 60, col. 10, ln. 44-76).

Claim 9 has been cancelled.

Regarding claim 10 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the ridge structure data, a skeleton line image obtained by thinning the image of the ridge (figs 3-4, also, col. 2, ln. 40-51).

Regarding claim 11 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the ridge structure data, a binary image obtained by binarizing the image of the ridge (figs 3-4, also, col. 2, ln. 40-51, also, col. 8, ln. 10-48, where the binarizing is further disclosed).

Regarding claim 12 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said detection section detects, as the relative positional relationship, a positional relationship of superposition between the partial image and the other partial image such that ridges same as each other in the partial image and the other partial image are smoothly connected to each other (*Hsu, fig 2 item 54, also, col. 2, ln. 22-35, and col. 4, ln. 10-48*). Mainguet further teaches establishing a positional relationship of superposition between the sampled partial image and the ~~other~~ previously sampled partial image such that ridges same as each other in the sampled partial image and the ~~other~~ previously sampled partial image are smoothly connected to each other (*Mainguet, figures 5, 10-12 as introduced in col. 3 lines 8-23 and expanded upon in at least col. 8 lines 31-51*).

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Claim 13 has been cancelled.

Regarding claim 14 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said detection section detects, as the relative positional relationship, a corresponding relationship of the ridges same as each other in the partial image and the other partial image (Hsu, fig 2 items 54-56, fig 8 item 60, also, col. 2 ln. 40-51), while Mainguet further teaches the sampld partial image and the other previously sampled partial image are processed by the detection section (*Mainguet, figures 5, 10-12 as introduced in col. 3 lines 8-23 and expanded upon in at least col. 8 lines 31-51*).

Claim 15 has been cancelled.

Regarding claim 16 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said sampling section samples obtains the sampled partial image by replacing the organism portion on a sampling face by a plural number of times for sampling a partial image, and wherein characteristic portion data regarding a partial image, having an area which has a side shared by or overlaps with at least one of the other partial images, from among a plurality of partial images sampled by said sampling section is used as an object of the synthesizing process by said synthesis section (Hsu, fig 2 item 50-56, col. 2, ln. 22-35, also, col. 2, ln. 52-67) while Mainguet further teaches one of the partial images having an overlapping area with another partial image (*Mainguet, figures 5, 10-12 as introduced in col. 3 lines 8-23 and expanded upon in at least col. 8 lines 31-51*).

Claims 17-19 have been analyzed and are rejected for the reasons outlined in claim 16 supra.

Regarding claim 18 Hsu et al. discloses an organism characteristic data acquiring apparatus, wherein said sampling section samples the partial image while the organism portion is relatively



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moved with respect to a sampling face for sampling a partial image, and wherein characteristic portion data regarding a partial image, having an area which has a side shared by or overlaps with at least one of the other partial images, from among a plurality of partial images sampled by said sampling section is used as an object of the synthesizing process by said synthesis section (fig 2 item 50-56, col. 2, ln. 52-67).

Claim 20 has been analyzed and is rejected for the reasons outlined in claim 1 supra as there are no substantial differences between the limitations in claims 20 and 1.

Claim 21 has been analyzed and is rejected for the reasons outlined in claim 9 supra as there are no substantial differences between the limitations in claims 21 and 9.

Claim 22 has been analyzed and is rejected for the reasons outlined in claim 1 supra as there are no substantial differences between the limitations in claims 22 and 1 despite those limitations manifesting in method form.

Claim 23 has been analyzed and is rejected for the reasons outlined in claim 9 supra as there are no substantial differences between the limitations in claims 23 and 9 despite those limitations manifesting in method form.

Claim 24 has been analyzed and is rejected for the reasons outlined in claim 1 supra as there are no substantial differences between the limitations in claims 24 and 1 despite those limitations manifesting in program form.

Claim 25 has been analyzed and is rejected for the reasons outlined in claim 9 supra as there are no substantial differences between the limitations in claims 25 and 9 despite those limitations manifesting in program form.

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Claim 26 has been analyzed and is rejected for the reasons outlined in claim 1 supra as there are no substantial differences between the limitations in claims 26 and 1 despite those limitations manifesting in program form.

Claim 27 has been analyzed and is rejected for the reasons outlined in claim 9 supra as there are no substantial differences between the limitations in claims 27 and 9 despite those limitations manifesting in program form.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. in view of Mainguet U.S. 6,289,114, further in view of Morita et al. US 4,827,527.

Regarding claims 5-6 Hsu in view of Mainguet fails to disclose that the organism characteristic data acquiring apparatus, wherein said extraction section extracts, as the characteristic portion data, a position or number of sweat glands which exists on or between the characteristic points of the ridge. However, Morita et al. discloses an extraction section which extracts, as the characteristic portion data, a position or number of sweat glands which exists on or between the characteristic points of the ridge within an organism characteristic data acquiring apparatus (Morita at least, col. 3, ln. 30-45, where detecting the existence and location of sweat glands is taught). Therefore it would have been obvious to a person having ordinary skill in the image processing arts at the time of the invention to modify the fingerprint feature correlator of Hsu in view of Mainguet to incorporate detecting the position of a number of sweat glands between characteristic points on a ridge. Morita would have rendered obvious utilization of an extraction section that extracts, as the characteristic portion data, a position or number of sweat glands that exists on or between the characteristic points of the ridge within an organism characteristic data acquiring apparatus. (See *In re KSR v. Teleflex*, 550 U.S. \_\_\_\_ (2007)).

*Response to Applicant's Arguments*

6. It is respectfully believed that the new grounds of rejection set forth herein obviate Applicant's arguments submitted 1/28/2008.

*Examiner's Note*

7. The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

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*Contact*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Koziol whose telephone number is (571) 270-1844. The examiner can normally be reached on M - alt. F 8:00-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached at (571) 272-7413. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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